Survival Analysis and European Union Decision-making

Golub, Jonathan

Postprint / Postprint
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:
Golub, J. (2007). Survival Analysis and European Union Decision-making. *European Union Politics*, *8*(2), 155-179. https://doi.org/10.1177/1465116507076428

European Union Politics
DOI: 10.1177/1465116507076428
Volume 8 (2): 155–179

SAGE Publications
Los Angeles, London, New Delhi and Singapore

Survival Analysis and European Union Decision-making

Jonathan Golub
University of Reading, UK

ABSTRACT

Practitioners as well as scholars of European integration have for decades debated why it takes so long for the European Union (EU) to adopt legislation and how to improve decision-making efficiency. Four studies have investigated decision-making speed using survival analysis, a particularly appropriate quantitative technique. In this paper I show that all four studies suffer from serious methodological problems that render their conclusions unreliable. I then outline where work in this area should focus, and take an initial step in this direction by fitting a methodologically more appropriate survival model to my 2002 EU decision-making data set (Golub, 2002). Substantively, the results indicate that throughout the EU's history, for the most important types of legislation, qualified majority voting (QMV) and EU enlargement have increased decision-making speed, whereas empowerment of the European Parliament and extreme preference heterogeneity amongst decision-makers have decreased it. Theoretically, formal approaches – spatial models and especially coalition theory – do a better job of explaining these results than do perspectives that privilege informal norms.

KEY WORDS

- decision-making
- European Union
- institutional rules
- survival analysis

Practitioners as well as scholars of European integration have for decades pondered why it takes so long for legislation to make its way through the complex European Union (EU) institutional structure and how to improve decision-making efficiency. After years of disagreement and ineffective declarations, the 1987 Single European Act (SEA), the 1993 Maastricht Treaty and, to a much lesser extent, the 1997 Treaty of Amsterdam expanded the scope of qualified majority voting (QMV) in order to improve legislative efficiency (Garrett, 1992; Moravcsik, 1998: 317; Tsebelis and Kreppel, 1998: 65). These institutional reforms are credited with expediting decisions and facilitating paralysis-free enlargement of the Union. As a result, the integration process was, until recently, viewed as 'a never ending success story' (Schneider, 2002). Member states, it seemed, had found the means to reconcile speed and an ever-expanding membership. But the deeply inadequate Nice Treaty of 2001 and the planned addition of 10 new states in 2004 soon raised concerns about a potential end to the previously harmonious combination of deepening and widening (Schneider, 2002; Steunenberg, 2002).

The study of decision-making speed holds both substantive and theoretical importance. Determining what actually produces or averts legislative paralysis is substantively essential for informed decisions about the EU's future, particularly the possible need for more QMV, the potential adverse by-products of European Parliamentary power, and whether the EU can function with such a large and diverse membership. Beyond this, findings about speed have theoretical implications for how to study EU decision-making. They speak to the relevance of spatial and coalition models and of formal rules versus informal norms.

Survival analysis, a technique for exploring why things endure, is perfectly suited for investigating EU decision-making speed. My first objective is to show that the four previous studies of decision-making speed that used survival analysis (Golub, 1999, 2002; König, 2007; Schulz and König, 2000) employed it in methodologically inappropriate ways that render their conclusions fundamentally suspect. Because they used different data sets, covariates and model specifications, the studies reached different conclusions, but whether or not the findings agree is irrelevant since none is reliable. After establishing the need, in effect, to wipe the slate clean, my second objective is to begin the reconstruction process.

I proceed as follows. After a theoretical discussion of the potential determinants of EU decision-making speed, I identify serious methodological problems in the previous survival analyses of EU decision-making that undermine their conclusions. Focusing on the most important type of legislation, I then derive preliminary, but more reliable, conclusions about EU decision-making speed. The main substantive findings suggest that, over the course

of EU history, QMV and enlargement have each expedited decision-making, whereas the formal involvement of the European Parliament and extreme heterogeneity in the preferences of decision-makers have slowed it down. Theoretically, formal approaches – spatial models, and especially coalition theory – account much better for these results than do perspectives that privilege informal norms.

Theoretical explanations for decision-making speed

Observers have consistently stressed that the EU legislative process gets bogged down as institutional obstacles or diversity of preferences amongst decision-makers increase. In the 1970s they attributed symptoms of paralysis to the Council's alleged reluctance to apply the original treaty's QMV provisions and to the 1973 enlargement, which, they concluded, had exacerbated conflict and made Council agreement more difficult to reach (European Communities, 1976; Sasse et al., 1977; Wallace et al., 1977). In subsequent decades, each successive round of accessions brought calls for more QMV in order to avert paralysis caused by an ever-larger, more diverse Union (Dinan, 2004: 178; Tsebelis and Kreppel, 1989: 63). After several treaty reforms in this direction, the planned entry of 10 new states and the limitations on QMV in the Nice Treaty renewed debates over the dangers of paralysis.

The longstanding focus on institutions and preferences seems intuitively reasonable, but how exactly do they relate to legislative paralysis? Spatial models and coalition theory provide two possible links, in that policy stability should depend on changes to the core, the win-set, and the proportion of winning coalitions (Hosli and van Deemen, 2002; Tsebelis, 2002). In the context of spatial models, the core is the set of policies that cannot be changed by a counterproposal given a particular decision rule, whereas the win-set of the status quo is the set of policies that can defeat the status quo. Larger cores are more likely to contain the status quo, thereby increasing legislative stability, whereas smaller win-sets increase inertia by reducing the number of alternatives that actors prefer to the status quo (Schneider et al., 2006; Tsebelis, 2002). The two concepts are 'quasi-equivalent' (Tsebelis, 2002: 26) and 'lead to the same analytical results . . . [since] the larger the size of the core the smaller the winset of the status quo' (Tsebelis and Yataganas, 2006: 433). Coalition theory makes the straightforward prediction that, as it becomes numerically easier to form a winning coalition, policy becomes less stable and easier to change.

In the extreme case, stability precludes the adoption of new legislation regardless of how long the actors negotiate. Short of this, inertia should

manifest itself in protracted negotiations since, with a larger core, smaller win-set or smaller proportion of winning coalitions, the more agreements are delayed until an actor shifts positions (e.g. the arrival of a new government) or a winning coalition crafts a complex package deal involving the introduction of a new dimension. To explain variation in decision-making speed I first focus on three factors from formal theory that affect the core, the win-set and the proportion of winning coalitions: voting rules, veto players and actor preferences. I then consider an alternative theoretical perspective that privileges informal norms.

Voting rules

Compared with unanimity, where decision-making is painfully slow (Neyer, 2004: 29; Scharpf, 2001), QMV should expedite decisions for two separate reasons. First, QMV should make Council agreement easier to reach by reducing the size of the core and expanding the size of the win-set of the status quo (Steunenberg, 2002; Tsebelis, 2002). Second, QMV should speed up decisions by increasing the proportion of winning coalitions in the Council and thereby reducing the capacity of individual states to block legislation (Hosli and van Deemen, 2002; Selck, 2006; Steunenberg, 2002).

Veto players

According to spatial models, any increase in the number of veto players, unless they are located within the preferences of the previous players (i.e. 'absorbed'), will enlarge the core and shrink the win-set, which should make policies more stable (Tsebelis, 2002). Under no conditions will additional veto players shrink the core and destabilize policies. There are six instances in EU history where the number of veto players has changed. Five enlargements gave new member states veto power in the Council, and the EP became a veto player as its formal powers grew from consultation to cooperation or co-decision (Tsebelis, 2002). Evidence to date suggests that new member states were only partly absorbed, whether on the pro/anti-integration, left/right or individual policy sector dimensions (Franchino, 2006: ch. 4; Hayes-Renshaw and Wallace, 1997; König, 2007; Michalski and Wallace, 1992; Schneider et al., 2006); some enlargements exacerbated these divides, others decreased them.[1] And evidence strongly suggests that the EP was certainly not absorbed. It tends to hold extreme preferences (Selck, 2006), so its formal involvement should increase heterogeneity and produce the same sort of effect as adding an outlier member state.

According to coalition theory, enlargement should make agreement more difficult under unanimous voting regardless of whether or not new members

are absorbed, because it decreases the proportion of winning coalitions (Hosli and van Deemen, 2002; Steunenberg, 2002). This should slow decision-making (Schneider et al., 2006). Practically, though, since with only six member states less than 1.6% of unanimous coalitions were winning, a further reduction might have had no significance. Enlargement should not slow decisions made under QMV, however, since in the Council only connected coalitions form (those where governments are adjacent in the policy space) and therefore the proportion of connected winning coalitions (CWCs) remains fairly stable (Hosli and van Deemen, 2002).[2] In fact, going from 6 to 9 states or from 12 to 15 actually increases the proportion of CWCs, so that enlargement should accelerate decision-making speed.

Simulations largely confirm this optimistic picture of the relationship between enlargement and legislative inertia, even if we allow for non-connected coalitions. Based on their results, enlargement, whether from 6 to 10 or from 15 to 27 states, should not significantly slow decision-making under QMV, regardless of the dimensionality of the issue space (Selck, 2006; Steunenberg, 2002). Under unanimity in a one-dimensional space, enlargement from 6 to 10 should slow decisions slightly, but after that point inertia is already so high that there is diminishing harm from each additional enlargement. In two or three dimensions, however, the negative effects of enlargement diminish much more gradually (Selck, 2006: 44–6).

Preferences

With the number of veto players fixed, any increase in the heterogeneity (i.e. range) of the preferences of decision-makers will also enlarge the core and shrink the win-set of the status quo (Tsebelis, 2002: 30). There are numerous instances when shifts in EU actors' preference heterogeneity might have occurred, the most obvious being after every national and EP election. Evidence shows that heterogeneity on a variety of dimensions has fluctuated enormously with government turnover and particularly the presence of national leaders (or coalitions) with extreme views. For example, by far the greatest left–right divergence occurred soon after the arrival of Margaret Thatcher as UK prime minister in 1979 (Franchino, 2006). Based on spatial models, we would therefore predict the pace of EU decision-making to alter after each election, getting slower (faster) as preference heterogeneity increased (decreased).

Informal norms

Theoretical perspectives that emphasize the importance of informal norms, rather than the formal rules integral to spatial models or coalition theory, offer

very different predictions from those set out above. The first is that QMV expedited decisions in only some periods of EU history. According to the Luxembourg Compromise thesis, following French President Charles de Gaulle's threats to leave the EC (Wallace and Winand, 2006), decisions were made by 'de facto unanimity voting even where QMV was authorised' (Moravcsik, 1998: 315). Allegedly this resulted in the (semi)paralysis of EC decision-making for the next two decades (Tsebelis and Kreppel, 1998; Peterson and Bomberg, 1999). Formal rules became effective only in the second period of EU history, once the SEA renounced the Compromise and expanded the scope of QMV (Ehlermann, 1990; Moravcsik, 1998; Parsons, 2003; Peterson and Bomberg, 1999).

Many believe that informal norms once again trump formal rules in the third, and current, period of EU history, marked by the 1993 Maastricht Treaty. Assessments of post-1993 decision-making claim that Council and COREPER (Committee of Permanent Representatives) delegates disregard formal voting rules and prolong negotiations until they reach a 'unanimous consensus' (Heisenberg, 2005; Joerges and Neyer, 1997). This might be due to a post-Maastricht backlash by member states and the public against centralization of power in Brussels and perceived abuses of QMV (Pollack, 2000). A unanimous consensus norm would rob QMV of its effects on the size of the core as well as on the proportion of winning coalitions, and thus on decision-making speed.

A second prediction is that, owing to the informal dynamics of 'deliberative interaction', adding more actors (i.e. voices) to the decision-making process has a neutral effect or even expedites legislation (Neyer, 2004: 30). This theoretical position accords with observations by some that the co-operation and co-decision procedures steadily improved the EU's democratic legitimacy without encumbering its decision-making process (Dinan, 1994: 276; Ehlermann, 1990: 1107).

Third, this perspective makes predictions about the effects of veto players that hinge on assumptions regarding whether or not formal rules actually mattered across different periods of EU history. If the Luxembourg Compromise thesis is correct, and especially if 'unanimous consensus' has been a constant characteristic of Council negotiations even after the SEA, then every enlargement would have negative effects since each new member state could veto *all proposals* and the proportion of winning coalitions would drop rapidly towards zero even if we assume that only connected coalitions form. Other possibilities are that QMV was actually effective during the Luxembourg Compromise period as the EC grew from 6 to 12 states, or it became effective after the third enlargement and has remained so ever since, or it was effective only during the 1987–93 period. In short, the more that formal voting

rules mattered throughout EU history, the greater the expected effects of institutional reforms and the less the expected negative effects of enlargements.

Previous survival analyses of EU decision-making speed

To date, what has quantitative analysis of empirical evidence taught us about the pace of legislative decision-making? Has QMV had the expected effects, and throughout all historical periods? Has the EU managed to deepen and widen harmoniously? If so, what are the implications for the various theoretical propositions discussed above?

Unlike some other quantitative approaches, survival analysis is perfectly suited for investigating factors related to decision-making speed.[3] Four studies have applied this method to different data. Golub (1999) examined all 1141 proposals for Directives made between January 1974 and December 1996. To compile his data set he used the EU's CELEX and APC (now called Prelex) databases, augmented by hard copies of COM documents and the *Official Journal*. Drawing data from CELEX, Schulz and König (2000) examined 5183 proposals for Directives, Regulations and Decisions made between January 1984 and December 1994. König (2007) extended this to all proposals made between 1984 and 1998. Golub (2002) examined all 1669 proposed Directives made between 1968 and 1998. Extensive use of COM documents and the *Official Journal* was essential for the pre-1974 period when the coverage of the electronic databases deteriorates.

The studies also used different covariates to capture the effects on decision-making speed of institutional rules and the configuration of member state preferences. Although in a few respects the studies disagree about the effects of institutional rules and national preferences, for the most part their findings are not so much conflictual as just different. This is hardly surprising given the disparities in time-span covered, data and variables. Of particular note is that Golub focused exclusively on Directives and sheds no light on what determines the pace of adoption for Regulations or Decisions. These are the two most common types of instrument and the ones that predominate in the other studies. Because of the short time periods they cover and their chosen coding schemes, neither Schulz and König (2000) nor König (2007) have anything to say about many issues that Golub addresses: EU enlargement, the Luxembourg Compromise, the effects of institutional changes made by the SEA and Maastricht, formal rules versus informal norms, the effects of legislative backlog or the presence of extremist governments such as that of Thatcher. Details of the studies' findings and disparities need not concern us here, though, because all four suffer from serious methodological problems

that render their inferences unreliable, regardless of whether they agree or disagree. In the following section I identify these problems. I then discuss how we should go about constructing and testing a more satisfactory theory of EU decision-making speed, and I take an initial step in this direction.

A legacy of heroic assumptions and unreliable results

In order to conduct survival analysis, researchers face two crucial decisions. One relates to the shape of the *baseline hazard rate*, another relates to whether or not the *coding and effects of the covariates remain fixed* over time. All four prior survival studies of EU decision-making mishandled these methodological decisions.

Assumptions about the baseline hazard

Given an individual legislative proposal under consideration, the *hazard rate* is, effectively, the probability that at any given point in time the proposal is adopted, given that adoption has not yet occurred. The baseline hazard rate is the underlying effect the passage of time has on the adoption rate once the independent variables are taken into account. The baseline hazard can take an infinite variety of shapes, each reflecting a different form of duration dependence. Duration dependence is more a 'statistical nuisance' than an object of interest, since it is really just unexplained variance that is correlated with survival time (Box-Steffensmeier and Jones, 2004).

With parametric models, the researcher must specify the shape for the baseline hazard. One should select a particular parametric shape only on the basis of a strong a priori theory. The choice of shape is crucial, since it will directly affect the estimated coefficients. Fitting a possibly erroneous baseline hazard function to the data can impart enormous bias to the estimates (Box-Steffensmeier and Jones, 2004). Fortunately, the alternative Cox semi-parametric model allows the baseline to take on literally any shape. Simply put, 'when you do not have a good a priori reason to know the shape of the hazard, you should use [Cox] semiparametric analysis' (Cleves et al., 2002: 214).

Three of the previous studies on EU decision-making speed employed parametric analysis without adequate justification. None based their choice of the log-logistic baseline form on strong a priori theory, and each used inherently unreliable diagnostic tests. Golub rejected other parametric forms on the grounds that plots of the transformed survivor function were not linear, and rejected a Cox model because stratified hazard plots indicated the

presence of non-proportionality (1999: 748). To justify a log-logistic model, Golub (1999) speculated that legislative proposals should face an increasing chance of adoption up to a certain point, past which they are 'politically dead'. The hazard rate would thus rise, peak, then fall. But, lacking a strong theory, it would be equally reasonable to conjecture that the chances of legislative adoption are strictly decreasing with time, or that the baseline hazard rate is bimodal, or even more complex. Schulz and König (2000: 662–3) and König (2006) also offer no a priori theory about the shape of the baseline hazard, and rely on the same two diagnostic techniques (transformed survivor and hazard plots) to justify a log-logistic parametric form.

There are major problems associated with each of these graphical diagnostics that render them unreliable (Golub, 2007). Using a plot of the hazard or transformed survivor function assumes that the data are from a homogeneous population (Allison, 1995: 94), which entails the further assumption that no covariates are related to survival time. The very fact that previous studies of decision-making speed developed hypotheses about the effects of covariates and engaged in multivariate analysis belies this assumption. A further fatal problem with both of these graphical methods, and with an additional diagnostic technique not employed by any of the four studies, known as Cox–Snell residual plots (Box-Steffensmeier and Jones, 2004; Collett, 2003), is that they lack the power to detect departures from the assumed model. All these plots can produce beautifully straight lines even when the model being fit is quite erroneous (Crowley and Storer, 1983).

Assumptions about the coding and effects of covariates

Time-varying covariates (TVCs) are variables that undergo what are known as state-changes, where the values initially assigned to a case change over its lifetime. The importance of including TVCs and not coding data with state-changes as time-constant has been thoroughly demonstrated (Box-Steffensmeier and Jones, 2004; Golub, 2007).

Three of the four previous survival analyses of EU decision-making ignored TVCs and wrongly treated all the covariates as time-constant (Golub 1999; König, 2007; Schulz and König, 2000). This assumption is clearly unjustified. All the key variables identified from spatial models, coalition theory and perspectives that privilege informal norms are liable to change over the lifetime of many individual cases as a result of treaty reform, EU enlargement, government turnover or new modes of actor behaviour – formal voting rules, the number of veto players, the heterogeneity of actor preferences, and the presence of a unanimous consensus norm. The presumption that variables remain fixed over the entire lifetime of each case is manifestly untenable when

individual legislative proposals under analysis can survive years or even decades before eventual adoption. For instance, using just his limited set of TVCs, Golub (2002) showed that nearly half the Directives proposed after 1968 experienced at least one state-change, and some experienced up to 11.

A second unjustified assumption shared by all four prior studies is that the effects of covariates do not change over time. This is a common assumption in survival analysis. The proportional hazards (PH) assumption maintains that 'each observation's hazard function follows exactly the same pattern over time' (Box-Steffensmeier and Jones, 2004: 132). It is a well-established fact that violations of the PH assumption can result in enormous bias and render the estimated coefficients meaningless (Box-Steffensmeier and Jones, 2004).

The Cox model, as well as most parametric models, makes the PH assumption. Because this assumption did not hold for their data and covariates, Schulz and König (2000) and König (2007) opted for a log-logistic model, which does not entail the PH assumption. However, they did not recognize that the log-logistic model makes a similar and equally demanding assumption – that the log-odds are proportional (Collett, 2003: 225–6). For the ratio of log-odds to be proportional, it must be independent of time, which is precisely the counterpart to the PH assumption made by other parametric forms, and just as demanding.

This assumption is also unjustified. For a start, Schulz and König (2000: 662) and König (2007) found empirical evidence of non-proportional effects. An equally serious problem is that none of the three studies recognized that *by definition* neither the PH assumption nor the proportional log-odds assumption holds when cases undergo state-changes, since every state-change produces a jump in an individual's hazard rate that destroys the proportionality of the hazard ratio (Box-Steffensmeier and Jones, 2004: 108).

To see why the very presence of TVCs makes the log-odds dependent on time, and thus no longer proportional, we need to modify the usual survivor function for the log-logistic parametric model to include TVCs so that the coding of each covariate $x_1, x_2, \ldots x_n$ depends on time. The survivor function becomes

$$\mathrm{S}(t) = \frac{1}{1 + (at)^p}, \text{ where } a = \exp[-\beta'(x(t))]$$

so that the ratio of the log-odds of survival for any two individuals i and j is now

$$\begin{aligned} \log \frac{Si(t)/[1 - Si(t)]}{Sj(t)/[1 - Sj(t)]} &= p \log(\exp[-\beta'(x(t)_j)]) - p \log(\exp[-\beta'(x(t)_i)]) \\ &= p[\beta'(x(t)_i - x(t)_j)], \end{aligned}$$

which is dependent on time, regardless of how many covariates one includes or omits.

Since 'remedies for nonproportionality in the parametric context are largely nonexistent' (Box-Steffensmeier et al., 2003: 40), this is yet another reason to reject a log-logistic parametric model. Instead we need to fit a Cox model, which allows reliable identification of proportionality violations and readily accommodates non-proportional effects of covariates by incorporating time-interactive terms of the sort $B^*g(t)$ where $g(t)$ is some function of survival time (usually $\ln(t)$) (Box-Steffensmeier and Jones, 2004).

To sum up, all four prior studies derive their findings from flawed methods. Three of the studies failed to incorporate TVCs despite the fact that many individual legislative proposals underwent numerous state-changes on key variables. The three studies that employed log-logistic parametric models picked this particular shape without adequate theoretical justification, based on inherently unreliable diagnostic tests. And all four studies failed to accommodate the non-proportional effects of covariates over time, effects that we know were present in Schulz and König's (and König's) data even with time-constant covariates, and that we know by definition will arise if these data are coded properly with TVCs.

Before proceeding, it is important to note that there is much to gain and very little to lose from switching from a log-logistic to a Cox model. The Cox has some limitations, but 'none of them is serious' (Yamaguchi, 1991: 102), and they are far outweighed by its advantages over parametric models.[4] In particular, with large samples the estimates from a Cox are nearly as efficient as those from a parametric model, the Cox actually yields more useful and reliable information about duration dependence, and, unlike the Cox, parametric models lack approximation methods to handle tied data (Golub, 2007).

What is to be done?

Without coding TVCs we simply cannot draw any reliable conclusions about the determinants of decision-making speed or the utility of our available theoretical tools. We also need data covering a long historical time span if we want to learn anything about the effects of changing rules, veto players and preference heterogeneity that resulted from five enlargements and reforms contained in the SEA, Maastricht, Amsterdam and Nice treaties.

Although we can salvage some important insights from previous survival studies, their data sets provide little help. Data from Golub (1999) are obsolete, having been replaced by a larger data set that codes for TVCs. Schulz and König's (2000) and König's (2007) data sets will need to be fundamentally recoded to include a wide array of TVCs. Even after this huge undertaking,

these two data sets will still cover too short a time to tell us anything about the Luxembourg Compromise period, the SEA or EU enlargements in 1973, 1981 and 1995.

The best place to start is with my 2002 data set because it is the only one that codes for TVCs (Golub, 2002). Moreover, even if König's data were eventually recoded, analysts will still need to disaggregate Directives for separate attention since they are the instrument type most likely to deal with important, complex and controversial issues rather than merely operational decisions and administrative matters (Peterson and Bomberg, 1999: 48; Schulz and König, 2000: 658; Thomson et al., 2004: 244). Of course there have been some important Regulations and Decisions over the years, for example on mergers and the regional development fund, but on balance Directives are most contentious, taking far longer to agree than Regulations or Decisions. Schulz and König (2000: 660–1) report that, for 1984–95, the likelihood of adoption for Regulations and Decisions peaked after only 45 days and then rapidly declined towards zero, whereas for Directives it peaked after 508 days and declined only gradually thereafter. Data from Prelex suggest that Decisions and Regulations were just as trivial in previous years. For proposals made in 1976, for example, the median time taken to adopt Decisions and Regulations was just 58 days, compared with 606 days for Directives.

To me, explaining variation in the adoption rate for the most significant and contentious laws constitutes a much more important task than discerning how a few more weeks can be shaved from the already short time needed to pass mostly trivial proposals. Therefore I relax the unjustified assumptions made by all earlier studies and fit a methodologically more appropriate model to Golub's 2002 data. Note that this is superior to just adding a dummy variable for instrument type (Drüner et al., 2006; Schulz and König, 2000) since that does not tell us what we want to know; it sheds no light on whether the effects of voting rules, EP involvement or Council preferences are different for Directives than for the vast number of routine proposals. An alternative, after recoding for TVCs, would be to use König's data even though they are dominated by trivial cases and include a battery of terms that interact with instrument type. But the time span would still be too short and this approach would eat up degrees of freedom and exacerbate multicollinearity.

Figure 1 presents the yearly trend in decision-making time for the 1669 proposed Directives, along with vertical markings for eight landmarks in EU history. Table 1 presents the independent variables and coding scheme. The variables are designed to assess the effect of changes to voting rules, veto players, actor heterogeneity and the presence of informal rules across three time periods. Two control variables account for the effects of expanding the legislative agenda to new policy sectors, where there might be more preference heterogeneity, and for accumulation in legislative backlog.

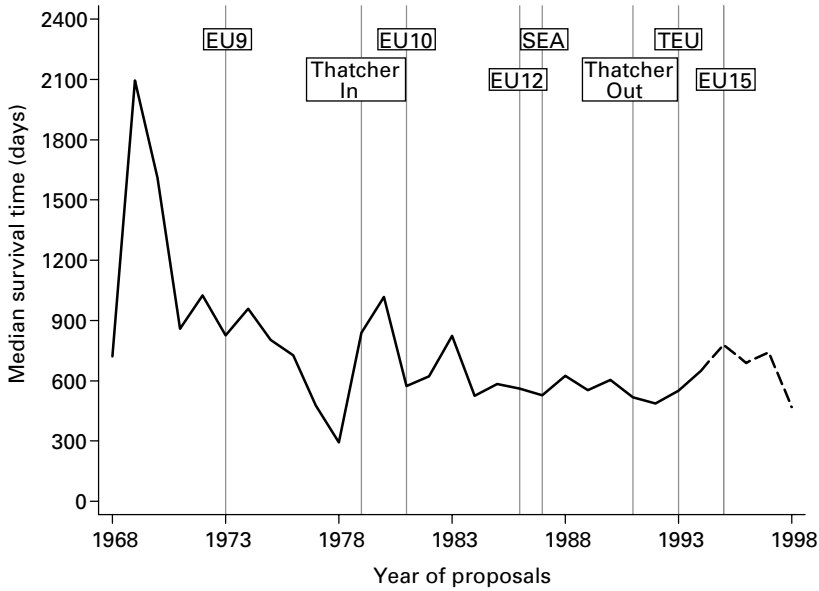

Figure 1 Survival time for proposed Directives.
Note: For each proposal, survival time is calculated as the number of days between official proposal and adoption or formal replacement or withdrawal. Because of heavy right-censoring, survival times for proposals made in 1995 onwards (the dashed line) are dramatically underestimated.

We know that non-proportional effects are likely even without TVCs, and are certain with them. Figure 2 shows that, as expected, the log-odds are not proportional for many covariates, so that a log-logistic model is inappropriate. The results of the Grambsch and Therneau test, reported in Table 2, reveal that for six of the covariates we can reject the null hypothesis of proportionality ($p < .05$).

Therefore the appropriate model specification is a Cox that accounts for state-changes in the data and non-proportional effects in six covariates. Table 3 reports the estimates from this model. I first discuss the substantive findings and then the theoretical implications.

Contrary to the Luxembourg Compromise thesis, formal voting rules were clearly not bypassed prior to the SEA. The QMV coefficient is large and significant, which indicates that the hazard rate for proposals subject to *de jure* QMV was dramatically higher than for proposals officially under unanimity. And because the model accounts for non-proportionality, we can, for the first time, discern how the effects of certain covariates wear off over the lifetime of legislative proposals. The hazard rate under QMV was 146% higher than for unanimity after six months of negotiations, and 82% higher after a year. After surviving four years of Council negotiation, a proposal was

Table 1 Explanatory variables and coding scheme

	Variable name	*Coding*
Formal voting rules	QMV	1 = QMV applies before 15 June 1987 0 = unanimity
	POSTSEAQMV	1 = QMV applies 16 June 1987 to 1 November 1993 0 = unanimity
	POSTTEUQMV	1 = QMV applies after 1 November 1993 0 = unanimity
European Parliament role	COOPERATION	1 = cooperation procedure 0 = no cooperation
	CO-DECISION	1 = co-decision procedure 0 = no co-decision
Nine member states	EC9	1 = Nine member states 0 = otherwise
Ten member states	EC10	1 = Ten member states 0 = otherwise
Twelve member states	EC12	1 = Twelve member states 0 = otherwise
Fifteen member states	EC15	1 = Fifteen member states 0 = otherwise
Margaret Thatcher	THATCHER	1= Thatcher is prime minister 0 = otherwise
Size of legislative backlog	BACKLOG	37–229 (measured at time of proposal)
Expanded agenda	AGENDA	1 = policy area added by SEA or TEU 0 = otherwise

just as likely to be adopted regardless of which voting procedure officially applied.[5]

Further evidence against the Luxembourg Compromise thesis, and against the standard view of the SEA as a watershed, is that the magnitude of the QMV effect subsequent to the SEA did not receive a sudden boost but instead remained statistically indistinguishable from that of the earlier period. In fact, during the first five months that a proposal spent under consideration in the Council, the effect of QMV on the hazard rate was actually greater in the pre-SEA period than it was during the next six years (1988–93).[6]

The results also indicate that in the post-Maastricht period formal provisions for QMV, while still effective, had much less impact on decision-making than they did in earlier years, even less than during the pre-SEA period. From 1993 to 1999, QMV increased the hazard rate by only 51% compared with proposals under unanimity. During the first *18* months that

Table 2 Test of proportional hazards assumption

	rho	*chi²*	*Df*	*Prob > chi²*
QMV	–.16771	36.75	1	.0000
QMVPOSTSEA	–.05814	4.46	1	.0347
QMVPOSTTEU	–.00328	0.02	1	.9018
COOPERATION	.24311	81.69	1	.0000
CO-DECISION	.15264	29.92	1	.0000
EC9	.01241	0.19	1	.6659
EC10	.00890	0.10	1	.7535
EC12	–.00651	0.05	1	.8158
EC15	–.01530	0.32	1	.5708
THATCHER	.09534	12.39	1	.0004
AGENDA	–.00985	0.13	1	.7164
BACKLOG	–.07693	7.88	1	.0050
GLOBAL TEST		161.66	12	.0000

a proposal spent under consideration in the Council, the effect of QMV on the hazard rate was larger in the pre-SEA period than during 1993–9. This suggests that increasing the scope of QMV, as provided for in the Constitution for Europe, would ease inertia as the EU goes forward but probably not as much as many would like or expect.

Strong confirmation of the EU as a 'never ending success story' is that successive enlargements did not cut the pace of decision-making. Not only did decision-making never slow down as a direct result of enlargement, but the large, positive and statistically significant coefficients for EC9, EC10, EC12 and EC15 indicate that after every single enlargement decision-making was *faster* than during the period when Council negotiations involved only six member states. And it was not that the expansion of QMV offset detrimental effects of enlargement. The inclusion of separate QMV, QMVPOSTSEA and QMVPOSTTEU variables controls for voting rule reform and isolates the effects of enlargement. This bodes well for decision-making speed in a Union of 25 or more states, although only more recent data will show whether the 2004 enlargement also had a benign effect.

What does appear to bog down decision-making is the presence of a maverick government. The large, negative and statistically significant coefficient on THATCHER shows that, while she was UK prime minister, the hazard rate for adoptions was still 22% lower after 6 months of negotiations, and the 'Thatcher effect' wore off only after a proposal had survived 14 months. Looking ahead, it appears that the real threat to speedy EU

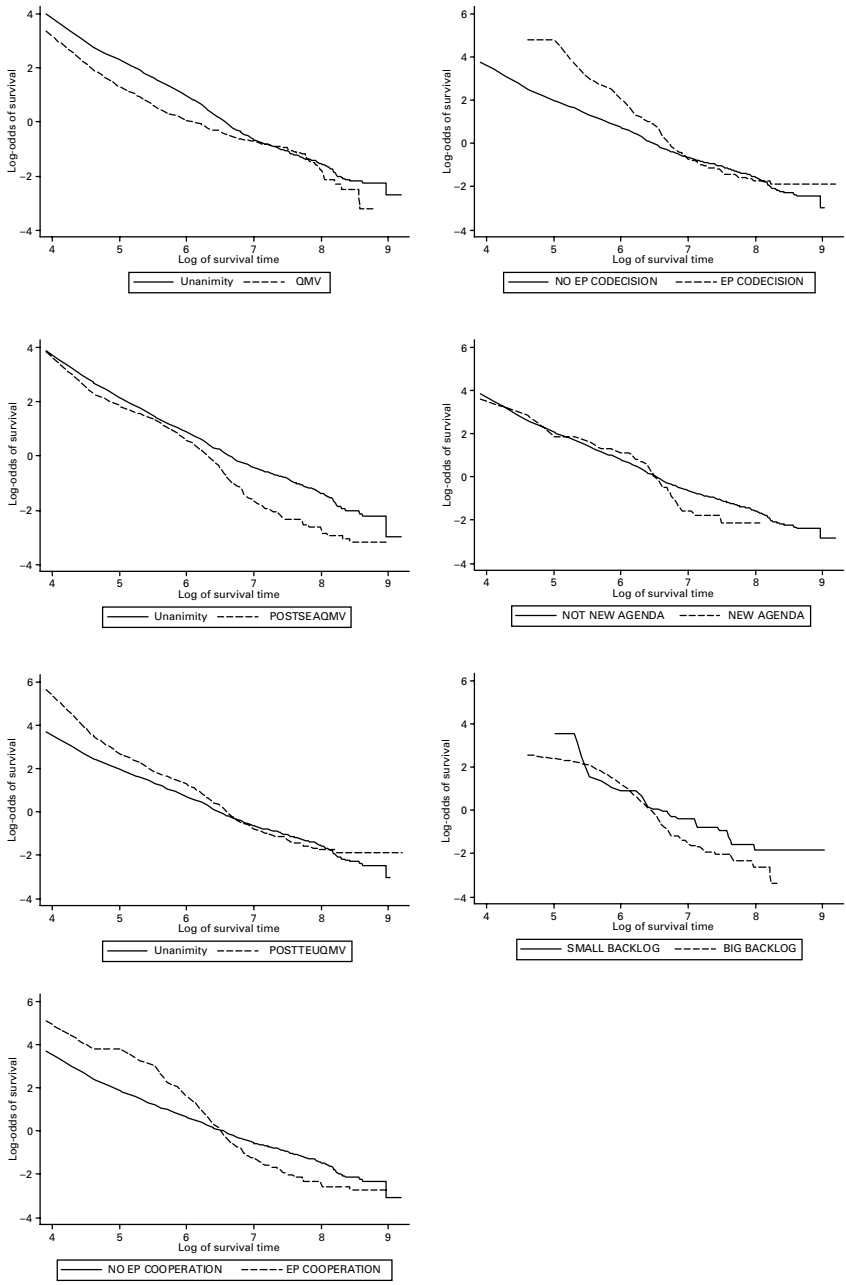

Figure 2 Tests of the log-logistic model's proportional log-odds assumption.

Table 3 Cox model of EU decision-making speed

Variable	*Coefficient*	*Standard error*
QMV[a]	3.122****	0.478
QMVPOSTSEA[a]	2.110****	0.513
QMVPOSTTEU[a]	0.413**	0.166
COOPERATION[a]	–6.041****	0.614
CODECISION[a]	–5.001****	0.876
EU9[a]	0.496**	0.198
EU10[a]	0.457*	0.243
EU12[a]	0.659**	0.257
EU15[a]	0.571**	0.263
THATCHER[a]	–1.716****	0.379
AGENDA	0.177	0.191
BACKLOG	0.026****	0.007
QMV*ln(t)	–0.428****	0.079
QMVSEA*ln(t)	–0.224***	0.085
COOP*ln(t)	0.890****	0.099
CODEC*ln(t)	0.725****	0.134
THATCHER*ln(t)	0.282****	0.061
BACKLOG*ln(t)	–0.004***	0.0009
n	1669	
Decision-days	1,800,781	
Log-likelihood	–8651	

Notes: Data are right-censored on 17 December 1999.
**** $p < .001$, *** $p < .01$, ** $p < .05$, * $p < .10$.
[a] Time varying covariate.

decision-making is not more member states but the election of extremists, whether in the new or the old members.

An even more worrying finding is that there is a costly trade-off between efficiency and democratic inclusiveness. Democratic legitimacy conferred on EU decisions by successive expansions of the European Parliament's powers has been purchased at the expense of considerably prolonged decision-making. The COOPERATION and CODECISION coefficients, read in conjunction with their respective time-interactive terms and the QMVPOST-TEU variable, show the enormous drag exerted by Parliamentary involvement. For the cooperation procedure, during 1987–93 this drag actually outweighed the effects of QMV during the first year of a proposal's survival time, and for both the cooperation and co-decision procedures during 1993–9, it swamped the effects of QMV for the first 18 months of survival time. This suggests that proposals to shift policy-making from unanimity to co-decision,

such as the Constitution for Europe, might cut the democratic deficit but will produce no net gain in decision-making speed, and shifts from QMV with consultation to co-decision will actually exacerbate inertia.

Turning to the control variables, mounting legislative BACKLOG significantly accelerates current Council decision-making. This is a healthy organizational response – as the volume of pending proposals grows, this pressures the Council to reach agreement more quickly on new proposals. The AGENDA coefficient is statistically insignificant, which indicates that expanding legislative activity to new policy sectors, as was done with the SEA and the Maastricht Treaty, did not slow decision-making. This should comfort those who want to see timely action in relatively recent or newly 'communitized' areas such as immigration or justice and home affairs.

These findings have two main theoretical implications. First, formal approaches – spatial models and especially coalition theories – perform well. As expected, QMV provisions that shrink the core, enlarge the win-set and raise the proportion of winning coalitions decrease policy stability, one manifestation of which is faster decision-making. Adding veto players that are not absorbed (the EP) enlarges the core, shrinks the win-set and slows decision-making. With the number of players fixed, a large increase in preference heterogeneity (Thatcher's government) produces the same effect. However, spatial theory cannot fully explain why decision-making accelerated despite the addition of veto players in 1973, 1981, 1986 and 1995. At most, EU enlargement would have no significant effect if the core were already very large or all the new veto players were absorbed. Coalition theory provides a possible answer: the formation of connected winning coalitions in low-dimensional space became easier.

Second, perspectives that privilege informal norms have little explanatory power. There is no evidence that formal voting rules have never mattered or that the Council has always operated by a unanimity norm. Rather, it appears that the Council has never operated under an unanimity norm, since QMV significantly expedited decisions in all three periods (pre-SEA, SEA to Maastricht, post-Maastricht), and enlargement did not have the anticipated negative effects. Nor do the results suggest the presence of the informal dynamics associated with deliberative democracy, since adding the EP as an extra voice dramatically slowed down decision-making.

This study leaves some important questions unanswered and draws attention to areas with significant scope for further research. One important puzzle is why QMV has a larger impact in some periods than in others. To answer this, much more work is needed to isolate the respective independent effects of rules and preferences and to explore their potential interactions. For example, the speed gap between voting procedures could have narrowed in

recent years because of extreme preference heterogeneity specifically in areas governed by QMV, or because heterogeneity has eased in areas governed by unanimity.

A second challenge is to separate the effects of veto players from those of preference heterogeneity. I used TVCs to reflect the change in veto players for each enlargement and EP empowerment, and the heterogeneity caused by one well-known instance of an extremist government, but obviously this marks only a first step. To push this approach further we need to augment my veto player TVCs with other TVCs that extend beyond the case of Thatcher to reflect the fact that the size of the core and status quo win-set fluctuated with each national and EP election. Efforts to construct periodic measures of preference heterogeneity offer great promise here (Franchino, 2006; Jupille, 2004; König, 2007; Schneider et al., 2006).

Ideally, the coding of this TVC would factor in the location of the status quo because recent work suggests that the size of the win-set, which depends on the status quo, might be an even better predictor than the size of the core, which does not (Drüner et al., 2006). However, there are major theoretical obstacles to doing this (Tsebelis, 2002: 23), and apart from these it is highly impractical – in the most extensive effort to date, the *European Union Decides* data set (DEU) (Thomson et al., 2006), the location of the status quo was available for only 62 cases, all from post-1996. The core and the win-set are certainly not perfect substitutes, but arguably they are conceptually quasi-equivalent (Tsebelis and Yataganas, 2006) and have been shown to be negatively correlated (Drüner et al., 2006). Thus if the status quo cannot be located, practicality suggests that we use the core as an imperfect proxy of the win-set in further efforts to distinguish between the effects of veto players and preference heterogeneity.

Conclusion

Concern over decision-making speed stretches back decades and holds both substantive and theoretical importance. Substantively, the need for speed features as a central element in the debate over the EU's historical development and potential future. Theoretically, findings about speed help us assess the utility of the tools we use to study the Union. Using different data sets and covariates, four previous survival analyses reached different conclusions about which factors produce or avert EU legislative paralysis. But each study made unjustified methodological assumptions that undermine the reliability of their inferences. In this paper I identified these problems, then relaxed the assumptions and fit a Cox model with non-proportional covariate effects to

Golub's 2002 EU decision-making data, the only data set that directly addresses the effects of institutional changes and EU enlargements, and the only one that codes for numerous state-changes in time-varying covariates. This choice was also a deliberate attempt to improve the signal to noise ratio by focusing exclusively on Directives, the most important type of legislative instrument.

Substantively, the results indicate that formal voting rules mattered throughout the EU's history. The negative effects of the Luxembourg Compromise, if they existed at all, have been dramatically overstated, since QMV significantly expedited decision-making long before the SEA, and the effects of QMV were no greater after the SEA than before. And, although the effect of QMV has diminished in the post-Maastricht period, it remains significant. The improved model specification also reveals for the first time that the effects of variables such as QMV wear off as the Council negotiates legislative proposals. This provides important lessons, for example that in some ways the supposed 'dark ages' of the EU were actually its heydays: during the first 18 months that a proposal spent under consideration in the Council, the effect of QMV was larger in the pre-SEA period than during 1993–9. As for the perennial deepening versus widening debate, enlargement of the EU from 6 to 15 states did not slow decision-making speed. If anything, it induced faster decisions. Nor did expanding the agenda to include new policy sectors compromise legislative pace. What does appear to bog down the process is the presence of a member state government with extreme preferences – in this analysis the 'Thatcher effect' – and the increased role of the European Parliament. As the EU moves forward and considers further reforms and enlargement, we should therefore count on but not overestimate the positive effects of broadening the scope of QMV, nor should we be overly concerned about paralysis in new policy fields or as a result of adding more member states, unless they substantially increase Council preference heterogeneity. At the same time, shifting from unanimity to co-decision or from QMV with EP consultation to co-decision might improve democratic legitimacy but probably will not speed up decision-making, and could make it slower.

Theoretically, the findings vindicate the explanatory power of formal approaches – spatial models and especially coalition theory – more than perspectives that privilege informal norms. Provisions for QMV expedite decision-making by shrinking the core, enlarging the win-set of the status quo, and raising the proportion of winning coalitions. Adding unabsorbed veto players and increasing the heterogeneity of decision-makers slow decisions by enlarging the core, reducing the win-set and decreasing the proportion of winning coalitions. But coalition theory might explain one important finding that spatial models cannot: adding veto players through

EU enlargement appears to have accelerated decision-making. Spatial models could account at most for neutral effects from enlargement (if all new states were totally absorbed, the core remains unchanged), but according to coalition theory decisions would get faster if the formation of connected winning coalitions in low-dimensional conflict space became easier. Informal approaches perform poorly. It appears that the Council has never operated under a unanimity norm, and that any informal dynamics associated with deliberative democracy are insignificant, since adding the EP as an extra voice dramatically slowed down decision-making.

Of course this paper represents only a first step towards a better grasp of what determines EU decision-making speed and what this tells us about our theoretical tools. Further advances in survival analysis methodology and formal theory, as well as more data, will deepen our understanding and might challenge the findings presented here. But the blueprint I offer – to use Cox models that account for state-changes and non-proportional effects, to develop TVCs that provide a long-term periodic measure of preference heterogeneity, to focus attention on the most important type of legislative instrument, and to concentrate more on the theoretical concepts of the core and the proportion of winning coalitions than on informal norms – should provide a good starting point.

Notes

I am grateful to Gerald Schneider and several anonymous referees for their comments, to the Nuffield Foundation for financial support (Social Science Small Grant H3047500), and to Dave Collett for extensive discussions about survival analysis.

1 Neo-functionalists, constructivists and historical institutionalists claim that socialization from previous integration, 'lock-in' effects and the growing benefits of further deepening should cause the preferences of member states as well as social actors to converge over time. If so, Council heterogeneity should steadily decrease as actors grow more cooperative and pro-European (Checkel, 2003; Lewis, 2005; Pahre, 1995; Pierson, 1998). Available evidence appears to contradict this view.

2 Very high dimensionality renders all coalitions connected (Garrett and Tsebelis, 1996; Hosli and van Deemen, 2002), but evidence suggests relatively low dimensionality in the EU (Mattila, 2004; Selck, 2006; Thomson et al., 2004).

3 Unlike ordinary least squares regression (Jupille, 2004; Sloot and Verschuren, 1990), survival analysis makes full use of information about legislative proposals that were right-censored, e.g. withdrawn rather than adopted or still under consideration when the study ended. It also relaxes the very demanding assumption that residuals are normally distributed.

4 Besides the Cox, two other alternatives are also available, in the form of discrete-time logistic regression and spline-smoothing of the survival times (Beck et al., 1998; Box-Steffensmeier and Jones, 2004; Royston and Parmar, 2002; Yamaguchi, 1991). But these methods offer no clear advantage over the Cox, apart from an improved ability to study the (substantively meaningless) baseline hazard (Box-Steffensmeier and Jones, 2004: 88, 90), and both come with their own drawbacks (Golub 2007). Although both these methods, especially spline-based models, deserve further attention in subsequent research, for the remainder of this paper I focus on the advantages over previous EU survival studies that a Cox model provides.

5 The effect of QMV 'wears off' when the hazard ratio QMV/UNANIMITY = 1. The numerator, $\exp(3.122 - 0.428\ln(t))$, equals 1 when $t = 1472$ days, or four years.

6 The effect of QMV remains greater than the effect of QMVPOSTSEA as long as the hazard ratio is greater than 1. Thus $[3.122 - 0.428\ln(t)] > [2.11 - 0.224\ln(t)]$ holds until $t > 143$ days, or about five months.

References

Allison, Paul (1995) *Survival Analysis Using the SAS System*. Cary, NC: SAS Institute.

Beck, Nathaniel, Jonathan Katz and Richard Tucker (1998) 'Taking Time Seriously: Time Series Cross Section Analysis with a Binary Dependent Variable', *American Journal of Political Science* 42: 1260–88.

Box-Steffensmeier, Janet and Bradford Jones (2004) *Event History Modeling in Political Science*. Cambridge: Cambridge University Press.

Box-Steffensmeier, Janet, Dan Reiter and Christopher Zorn (2003) 'Nonproportional Hazards and Event History Analysis in International Relations', *Journal of Conflict Resolution* 47(1): 33–53.

Checkel, Jeffrey (2003) '"Going Native" in Europe? Theorizing Social Interaction in European Institutions', *Comparative Political Studies* 36(1–2): 209–31.

Cleves, Mario, William Gould and Roberto Gutierrez (2002) *An Introduction to Survival Analysis Using Stata*. College Station, TX: Stata Corporation.

Collett, David (2003) *Modelling Survival Data in Medical Research*, 2nd edn. Florida: Chapman & Hall/CRC.

Crowley, John and Barry Storer (1983) 'Comment on a Paper by Aitkin, Laird and Francis', *Journal of the American Statistical Association* 78: 277–81.

Dinan, Desmond (1994) *Ever Closer Union? An Introduction to the European Community*. Boulder, CO: Lynne Rienner.

Dinan, Desmond (2004) *Europe Recast: A History of European Union*. London: Palgrave.

Drüner, Dietrich, Ellen Mastenbroek, Gerald Schneider and Torsten Selck (2006) 'The Core or the Winset? Predicting Policy Change and Decisionmaking Efficiency in the European Union', mimeo, University of Konstanz, Germany.

Ehlermann, Claus-Dieter (1990) 'The "1992 Project": Stages, Structures, Results and Prospects', *Michigan Journal of International Law* 11: 1097–118.

European Communities (1976) *Tindemans Report*. *Bulletin of the European Communities* 1/76.

Franchino, Fabio (2006) *The Powers of the Union: Delegation in the EU*. Cambridge: Cambridge University Press.
Garrett, Geoffrey (1992) 'International Cooperation and Institutional Choice: The European Community's Internal Market', *International Organization* 46(2): 533–60.
Garrett, Geoffrey and George Tsebelis (1996) 'An Institutional Critique of Intergovernmentalism', *International Organization* 50(2): 269–99.
Golub, Jonathan (1999) 'In the Shadow of the Vote? Decisionmaking in the European Community', *International Organization* 53(4): 733–64.
Golub, Jonathan (2002) 'Institutional Reform and Decisionmaking in the European Union,' in Madeleine Hosli and Adrian van Deemen (eds) *Institutional Challenges in the European Union*, pp.134–54. London: Routledge.
Golub, Jonathan (2007) 'Survival Analysis', in Janet Box-Steffensmeier, Henry Brady and David Collier (eds) *Oxford Handbook of Political Methodology*. Oxford: Oxford University Press.
Hayes-Renshaw, Fiona and Helen Wallace (1997) *The Council of Ministers*. London: Macmillan.
Heisenberg, Dorothee (2005) 'The Institution of "Consensus" in the European Union: Formal versus Informal Decisionmaking in the Council', *European Journal of Political Research* 44(1): 65–90.
Hosli, Madeleine and Adrian van Deemen (2002) 'Effects of Enlargement on Efficiency and Coalition Formation in the Council of the European Union', in M. Hosli and A. van Deemen (eds) *Institutional Challenges in the European Union*, pp. 65–88. London: Routledge.
Joerges, Christian and Jürgen Neyer (1997) 'Transforming Strategic Interaction into Deliberative Problemsolving: European Comitology in the Foodstuff Sector', *Journal of European Public Policy* 4(4): 609–25.
Jupille, Joseph (2004) *Procedural Politics: Issues, Influence and Institutional Choice in the European Union*. Cambridge: Cambridge University Press.
König, Thomas (2007) 'Divergence or Convergence? From Ever-Growing to Ever-Slowing European Legislative Decision-making Process', *European Journal of Political Research* 46(3).
Lewis, Jeffrey (2005) 'The Janus Face of Brussels: Socialisation and Everyday Decision-Making in the European Union', *International Organization* 59(4): 937–71.
Mattila, Mikko (2004) 'Contested Decisions: Empirical Analysis of Voting in the European Union Council of Ministers', *European Journal of Political Research* 43(1): 29–50.
Michalski, Anna and Helen Wallace (1992) *The European Community: The Challenge of Enlargement*. London: Royal Institute of International Affairs.
Moravcsik, Andrew (1998) *The Choice for Europe: Social Purpose and State Power from Messina to Maastricht*. London: UCL Press.
Neyer, Jürgen (2004) 'Explaining the Unexpected: Efficiency and Effectiveness in European Decision-making', *Journal of European Public Policy* 11(1): 19–38.
Pahre, Robert (1995) 'Wider and Deeper: The Links between Expansion and Integration in the European Union', in Gerald Schneider, Patricia Weitsman and Thomas Bernauer (eds) *Towards A New Europe*, pp. 111–36. London: Praeger.
Parsons, Craig (2003) *A Certain Idea of Europe*. Ithaca, NY: Cornell University Press.

Peterson, John and Elizabeth Bomberg (1999) *Decisionmaking in the European Union*. London: Macmillan.

Pierson, Paul (1998) 'The Path to European Integration: A Historical Institutionalist Analysis', in Wayne Sandholtz and Alec Stone Sweet (eds) *European Integration and Supranational Governance*, pp. 27–58. Oxford: Oxford University Press.

Pollack, Mark (2000) 'The End of Creeping Confidence? EU Policy-Making since Maastricht', *Journal of Common Market Studies* 38(3): 519–38.

Royston, Patrick and M. Parmar (2002) 'Flexible Proportional-Hazards and Proportional Odds Models for Censored Survival Data, with Application to Prognostic Modelling and Estimation of Treatment Effects', *Statistics in Medicine* 21: 2175–97.

Sasse, Christoph, Edouard Poullet, David Coombes and Gérard Deprez (1977) *Decision Making in the European Community*. New York: Praeger.

Scharpf, Fritz (2001) 'What Have We Learned? Problem-solving Capacity of the Multilevel European Policy', MPIfG Working Paper 01–4, Cologne.

Schneider, Gerald (2002) 'A Never Ending Success Story? The Dynamics of Widening and Deepening European Integration', in Bernard Steunenberg (ed.) *Widening the European Union: The Politics of Institutional Change*, pp. 183–201. London: Routledge.

Schneider, Gerald, Michael Dobbins and Dietrich Drüner (2006) 'Legislation in an Ever-Widening European Union: Gridlock, Chaos and Rentseeking?', mimeo, University of Konstanz, Germany.

Schulz, Heiner and Thomas König (2000) 'Institutional Reform and Decisionmaking in the European Union', *American Journal of Political Science* 44(4): 653–66.

Selck, Torsten (2006) *Preferences and Procedures: European Union Legislative Decisionmaking*. Dordrecht: Springer.

Sloot, Thomas and Piet Verschuren (1990) 'Decisionmaking Speed in the European Community', *Journal of Common Market Studies* 29: 75–85.

Steunenberg, Bernard (2002) 'An Ever Wider Union: The Effects of Enlargement on EU Decisionmaking', in Bernard Steunenberg (ed.) *Widening the European Union: The Politics of Institutional Change and Reform*, pp.97–118. London: Routledge.

Thomson, Robert, Jovanka Boerefijn and Frans Stokman (2004) 'Actor Alignments in European Union Decision Making', *European Journal of Political Research* 43: 237–61.

Thomson, Robert, Frans Stokman, Christopher Achen and Thomas König (eds) (2006) *The European Union Decides* (Cambridge: Cambridge University Press).

Tsebelis, George (2002) *Veto Players: How Political Institutions Work*. Princeton, NJ: Princeton University Press.

Tsebelis, George and Amie Kreppel (1998) 'The History of Conditional Agenda-Setting in the European Institutions', *European Journal of Political Research* 33(1): 41–71.

Tsebelis, George and Xenophon Yataganas (2006) 'The Treaty of Nice, the Convention Proposal and the Treaty Establishing the Constitution for Europe: A Veto Players Analysis', *European Constitutional Law Review* 1(3): 429–51.

Wallace, Helen and Pascaline Winand (2006) 'The Empty Chair Crisis and the Luxembourg Compromise Revisited', in Jean-Marie Palayret, Helen Wallace and Pascaline Winand (eds) *Visions, Votes and Vetoes*, pp. 21–42. Brussels: P.I.E.-Peter Lang.
Wallace, Helen, William Wallace and Carole Webb (eds) (1977) *Policy Making in the European Communities*. London: John Wiley.
Yamaguchi, Kazuo (1991) *Event History Analysis*. Newbury Park, CA: Sage.

About the author

Jonathan Golub is a lecturer in the Department of Politics and International Relations, University of Reading, Reading RG6 6AA, UK.
Fax: +44 118 975 3833
E-mail: j.s.golub@reading.ac.uk